


The presentation will begin shortly.



There will be no audio until then.



Vaccinations in Adults 50 Years and Older.

Vaccines

- Influenza
- Tdap
- Zoster
- Pneumococcal



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- Human immune defenses become weaker with age, which places older people at greater risk of severe illness from influenza combined with other high-risk or chronic conditions.
- During most seasons, it's estimated that 90 percent of seasonal flu-related deaths and between 50 and 60 percent of seasonal flu-related hospitalizations in the United States occur in people 65 years and older.



- Studies show that people 65 years of age and older:
 - Do not respond to standard-dose influenza vaccine as well as younger adults
 - May be left without sufficient protection with a standard-dose influenza vaccine
- Fluzone® High-Dose is an influenza vaccine designed specifically for people 65 years and older.
- Fluzone® High-Dose is a vaccine indicated for active immunization for the prevention of influenza disease caused by influenza A subtype viruses and type B virus contained in the vaccine.
- High-Dose influenza vaccine is a trivalent vaccine

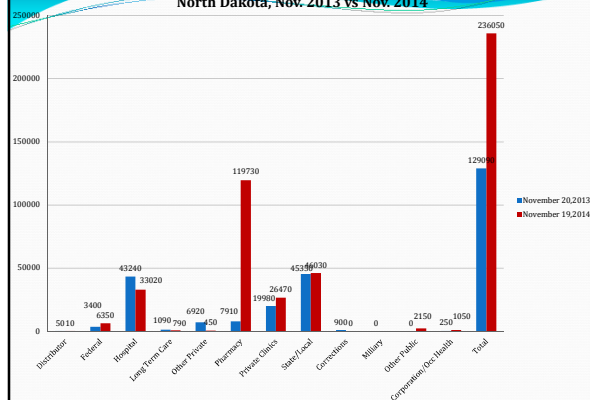
High-Dose Influenza Vaccine

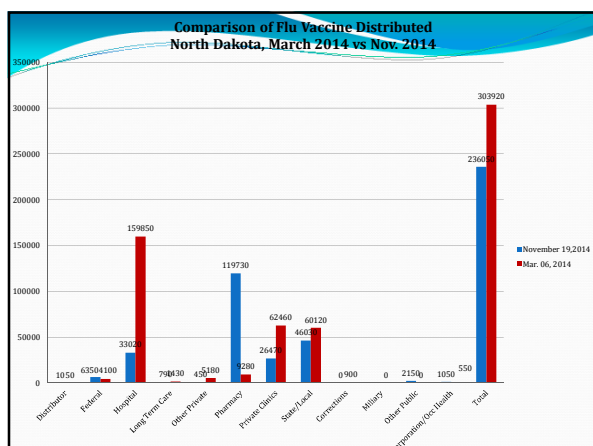
- Contains four times the amount of antigen to provide a better immune response
- Data from clinical trials comparing Fluzone® to Fluzone® High-Dose among people ages 65 years or older indicate that a stronger immune response occurs after vaccination with Fluzone® High-Dose.
- According to a study published in the New England Journal of Medicine, High-dose vaccine was 24.2 percent more effective in preventing flu in adults 65 years of age and older relative to a standard-dose vaccine.

High-Dose Influenza Vaccine

- The most common adverse events experienced were the same as regular flu vaccine
- Most people had minimal or no adverse events after receiving the Fluzone® High-Dose vaccine.
- The CDC and the ACIP have not expressed a preference for any flu vaccine indicated for people 65 and older. CDC recommends flu vaccination as the first and most important step in protecting against the flu.
- If Fluzone® High-Dose is administered to immunocompromised persons, including those receiving immunosuppressive therapy, the expected immune response may not be obtained.
- CDC recommends that people get vaccinated against flu soon after vaccine becomes available, preferably by October.
- It takes about two weeks after vaccination for antibodies to develop in the body and provide protection against the flu.

Comparison of Flu Vaccine Distributed
North Dakota, Nov. 2013 vs Nov. 2014





Pertussis

- Adults are the most common source of pertussis infection in infants.
- In adults, whooping cough usually starts like a common cold but then the coughing gets worse and can last for weeks or even months.
- Whooping cough spells can leave adults gasping for breath and unable to sleep and eat, and can cause cracked ribs and hospitalization.
- A major concern is that infected adults can infect infants who have a high risk of death from whooping cough.

Tdap

- Adults (parents, grandparents, caregivers, healthcare personnel) who will be in close contact with infants <12 months of age should be vaccinated.
 - Adults older than 65 should be vaccinated with Tdap
 - At least two weeks before close contact with infant
- Providers should not miss an opportunity to vaccinate adults with Tdap. Providers may administer any Tdap vaccine they have available.
- A single dose of Tdap is recommended for health care personnel who have not previously received Tdap as an adult and who have direct patient contact.



Tdap

- ACIP concluded that either vaccine administered to a person age 65 or older is immunogenic and will provide protection. A dose of either vaccine is considered valid.
- There is no upper age limit for Tdap vaccination. A single dose of Tdap is recommended for all adults.
- If Tdap status is unknown, Tdap should be administered

Tdap

- **Tdap should replace a single dose of Td for adults older than 19 who have not received a dose of Tdap previously.**
 - Adults who received last dose of Td ≥ 10 years earlier should receive a single dose of Tdap instead of Td
 - Tdap should be used instead of Td for wound management
 - Adults (parents, grandparents, caregivers, healthcare personnel) who will be in close contact with infants <12 months of age should be vaccinated

Tdap

- Tdap should be administered regardless of interval since last tetanus or diphtheria toxoid-containing vaccine.
 - There is NO need to wait 2–5 years to administer Tdap following a dose of Td
- Tdap may safely be given at the same time as other vaccines.
- When a tetanus toxoid-containing vaccine is needed for wound management in a person who has not previously received Tdap, the use of Tdap is preferred over Td.

Td

- Td should only be used for:
 - Wound prophylaxis for patients who have documentation of a previous dose of Tdap
 - If unknown, give Tdap
 - Individuals who are incompletely immunized against tetanus and diphtheria
 - Need three doses of tetanus- and diphtheria-containing vaccine, one dose should be Tdap
 - Minimum interval between first two doses is 4 weeks
 - Third dose should follow second dose by 6-12 months

Shingles

- Transmission: Shingles is a reactivation of the VZV virus and this condition is not spread through sneezing, coughing or casual contact
 - Anyone who has recovered from chickenpox may develop shingles
 - Shingles is more common in people 50 years old or older, people who have medical conditions that keep the immune system from working properly, or people who receive immunosuppressive drugs

Zoster Vaccine

- A single dose of zoster vaccine is recommended for adults ages 60 and older, regardless of whether they report a prior episode of herpes zoster
 - Zoster vaccine has been approved by the FDA for use in adults 50 and older, but the ACIP has not yet changed their recommendation
- Should be vaccinated, even if unknown history of chickenpox

Zoster Vaccine

- Although the Zoster vaccine is FDA approved for 50 years and older, the ACIP did not change their recommendation for people age 50 through 59 years.
 - Though the burden of herpes zoster disease increases after age 50, disease rates are lower in this age group than they are in persons age 60 years and older
 - There is insufficient evidence for long term protection provided by the vaccine
 - Persons vaccinated at younger than age 60 years may not be protected when the incidence of zoster and its complications are highest
- Zoster vaccine is approved by the FDA for people age 50 through 59 years and clinicians may vaccinate persons in this age group without an ACIP recommendation.

Zoster Vaccine

- Zoster vaccine recipients had a 51 percent reduction in shingles and less severe illness when shingles did occur.
- In the pre-licensure trial, zoster vaccine was 66.5 percent effective in preventing postherpetic neuralgia (PHN)
- Zoster vaccine will lessen the severity of both shingles and PHN if a person should develop shingles after vaccination

Zoster Vaccine

- Zoster vaccine may safely be given at the same time as other vaccines
 - An inactivated vaccine can be administered either on the same day as or at any time before or after another inactivated or a live vaccine
 - Any two LIVE vaccines that are not given on the same day must be spaced at least four weeks apart



Zoster Vaccine

- If zoster vaccine was recently administered to a patient, the tuberculin skin test should be delayed for four weeks from the date of the vaccine dose.
 - Tuberculin skin test screening should be scheduled prior to or on the same day as the shingles vaccination
- The ACIP's General Recommendations on Immunization state that in the absence of specific recommendations, when scheduling tuberculin skin test screening and administering other live-attenuated virus vaccines, clinicians should follow guidelines for measles-containing vaccine.

Zoster Vaccine

- There is no waiting period for administering zoster vaccine following transfusion
- If receiving cancer chemotherapy, wait three months after therapy is discontinued before administering zoster vaccine
- If they were receiving high-dose steroids, isoantibodies, immune-mediators, or immunomodulators, wait one month after therapy is discontinued
- If receiving low doses of methotrexate, azathioprine, or 6-mercaptopurine, waiting is not necessary as these therapies are not considered immunosuppressive

Zoster Vaccine

- Lupus or rheumatoid arthritis is not a contraindication to zoster vaccination
 - Immunosuppressive drugs used to treat these conditions could be a contraindication
- Administering zoster vaccine to a person whose immunity was recently boosted by a case of shingles might reduce the effectiveness of the vaccine.
 - ACIP does not have a specific recommendation on this issue. But it may be practical to defer the zoster vaccination for 6 -12 months after the shingles has resolved so that the vaccine can produce a more effective boost to immunity.

Zoster Vaccine

- A person who receives the zoster vaccine who has close household or occupational contact with people who are at risk for developing severe varicella or zoster infection do not need to take any special precautions after receiving the shingles vaccine.
 - The only exception is in the rare instance when a person develops a varicella-like rash after receiving zoster vaccine
 - If a rash develops, the vaccinated person should restrict or avoid contact with an immunocompromised person if the immunocompromised person is susceptible to varicella

Zoster Vaccine

- Serologic studies indicate that almost everyone born in the United States before 1980 has had chickenpox
- As a result, there is no need to ask people age 60 years and older for their varicella disease history or to conduct lab tests for serologic evidence of prior varicella disease.
- A person age 60 or older who has no medical contraindications, is eligible for zoster vaccine regardless of their memory of having had chickenpox.

Zoster Vaccine

- ACIP recommends that if a provider mistakenly administers varicella vaccine to a person for whom zoster vaccine is indicated the dose should not be considered valid and the patient should be administered a dose of zoster vaccine during that same visit.
- If the error is not immediately detected, a dose of zoster vaccine should be administered four weeks after the varicella vaccine dose to prevent potential interference of two doses of live attenuated virus.

Streptococcus Pneumoniae

- A bacteria that is commonly found in the human respiratory tract.
- May be isolated from the nasopharynx of 50-70 percent of normal healthy adults.
- Can sometimes cause severe invasive disease.
 - Bacteremia
 - Meningitis
 - Pneumonia
- More than 90 serotypes of *S. pneumoniae*

Pneumococcal Vaccine

- Two doses are recommended for all adults ages 65 and older
- Adults 65 and older need to be revaccinated **once** if they received a dose prior to turning 65
 - Second dose of PPSV23 should be given at least 5 years after first
- **Routine revaccination is not recommended**

PPSV23

- Pneumovax® or PPSV23 is a polysaccharide vaccine that protects against 23 types of pneumococcal disease
- All adults over 65 should receive one dose
- Also recommended for individuals between 2 and 64 with certain health conditions

PPSV23

- Revaccination five years after the first dose of PPSV23 is recommended for:
 - Adults younger than age 65 years at highest risk for serious pneumococcal infection or who are likely to have a rapid decline in antibody levels
 - Adults age 65 years and older who received their first dose for any indication when they were younger than age 65 years. Adults who receive PPSV23 at or after age 65 years should receive only a single dose

PPSV23

- PPSV23 vaccine is 60 percent - 80 percent effective against invasive pneumococcal disease when it is given to immunocompetent people age 65 and older or people with chronic illnesses. The vaccine is less effective in immunodeficient people.
- Although PPSV23 is not as effective as some other vaccines, it can significantly lower the risk of serious pneumococcal disease and its complications in most recipients.

PPSV23

- Studies have shown that Pneumovax® provides a 57 percent overall rate in disease reduction when looking at all populations as a whole
- This chart shows the effectiveness of Pneumovax® by disease

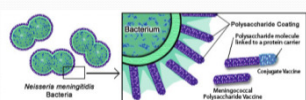
Disease	Reduction Rate
Chronic pulmonary disease	65%
Congestive heart failure	69%
Coronary vascular disease	73%
Immunocompromised patients aged >65 years	75%
Diabetes	84%

PPSV23

- Recommended for people of any age with:
 - Chronic illness: cardiovascular disease, pulmonary disease, diabetes, alcoholism, cirrhosis, CSF leaks, cochlear implants
 - Decreased immunologic function
 - HIV infection
 - Smokers
 - People with asthma

Polysaccharide Vaccine

- Polysaccharide vaccines
 - Not consistently immunogenic in children younger than 2 years of age
 - Repeated doses of most inactivated protein vaccines cause the antibody titer to go progressively higher, but this does not occur with polysaccharide antigens
 - Revaccination every 5 years is not needed

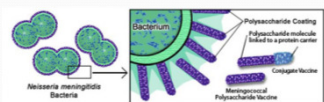


PCV13

- Prevnar® or PCV13 is conjugate vaccine that protects against 13 types of pneumococcal disease
- Routinely recommended for children.
- Also recommended for adults with certain health conditions.
- New ACIP recommendation
 - All adults over 65 should receive a dose

Conjugate Vaccine

- Conjugate vaccines contain polysaccharides that are chemically linked to a protein
 - Makes a more potent vaccine
 - Changes the immune response from T cell independent to T-cell dependent leading to increased immunogenicity in infants and antibody booster response to multiple doses of vaccine



Adult PCV13 Recommendations

- The CDC recommends the use of PCV13 in adults 19 years of age or older with specific immunocompromising conditions

Risk Group	Underlying Medical Condition	PCV13	PPSV23*	Revaccination at 5 years after first dose
		Recommended	Recommended	
Immunocompetent persons	Chronic heart disease [†]		✓	
	Chronic lung disease [§]		✓	
	Diabetes mellitus		✓	
	CSF leaks	✓		
	Cochlear implants	✓	✓	
	Alcoholism		✓	
	Chronic liver disease		✓	
	Cigarette smoking		✓	

Adult PCV13 Recommendations Cont.

Risk Group	Underlying Medical Condition	PCV13	PPSV23*	Revaccination at 5 years after first dose
		Recommended	Recommended	
Persons with functional or anatomic asplenia	Sickle cell disease/other hemoglobinopathies	✓	✓	✓
	Congenital or acquired asplenia	✓	✓	✓
	Congenital or acquired immunodeficiencies [†]	✓	✓	✓
	HIV infection	✓	✓	✓
	Chronic renal failure	✓	✓	✓
	Nephrotic syndrome	✓	✓	✓

Adult PCV13 Recommendations Cont.

Risk Group	Underlying Medical Condition	PCV13	PPSV23*	Revaccination at 5 years after first dose
		Recommended	Recommended	
Immunocompromised persons	Leukemia	✓	✓	✓
	Lymphoma	✓	✓	✓
	Hodgkin disease	✓	✓	✓
	Generalized malignancy	✓	✓	✓
	Iatrogenic immunosuppression ‡	✓	✓	✓
	Solid organ transplant	✓	✓	✓
	Multiple myeloma	✓	✓	✓

New Adult PCV13 Recommendations for All Adults over Age 65 Years

- On August 13, the Advisory Committee on Immunization Practices (ACIP) voted to recommend one dose of PCV13 to every adult 65 and older who has not had one previously.

New Adult PCV13 Recommendations Cont.

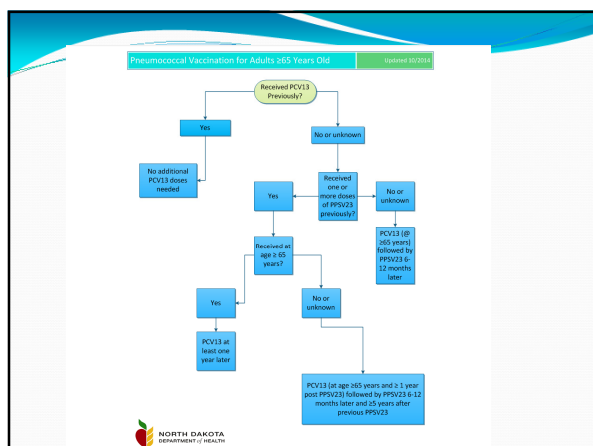
- Adults 65 and older who have not had a dose of PPSV23 (Pneumovax®) or whose history is unknown should receive a dose of PCV13 followed at least 6 - 12 months later by a dose of PPSV23.

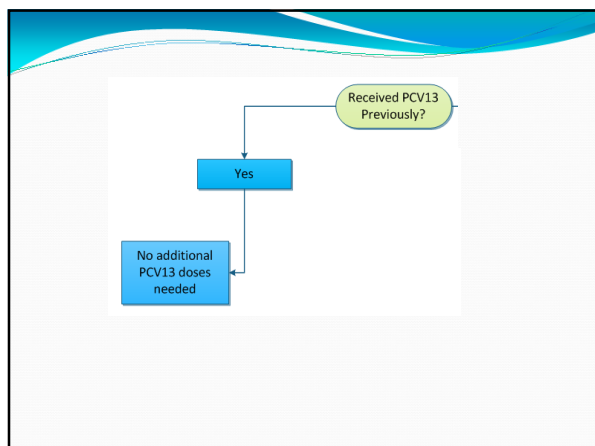
New Adult PCV13 Recommendations Cont.

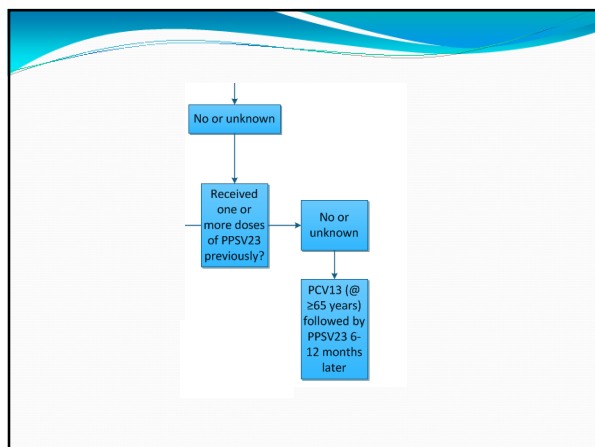
- Adults 65 and older who have not had a dose of PCV13, but have already received a dose of PPSV23 since turning 65 should receive a dose of PCV13 at least 1 year after the dose of PPSV23.

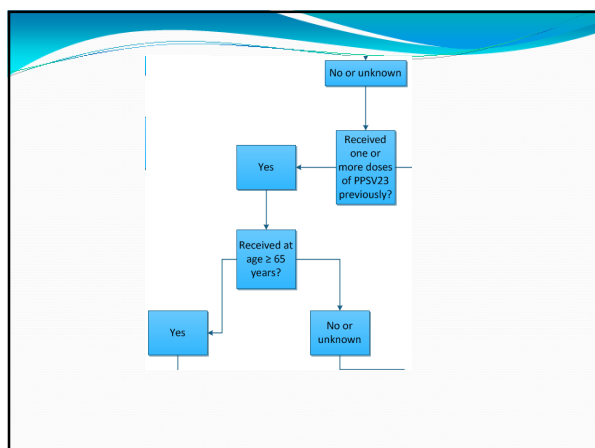
New Adult PCV13 Recommendations Cont.

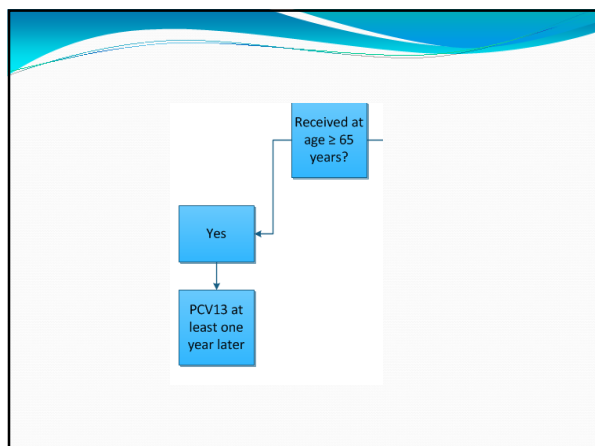
- Adults 65 and older who received a dose of PPSV23 before turning 65 should have a dose of PCV13 at least 1 year after the most recent dose of PPSV23, followed by a dose of PPSV23 at least 6-12 months later, provided that the minimum interval between the 2 doses of PPSV23 is at least 5 years.

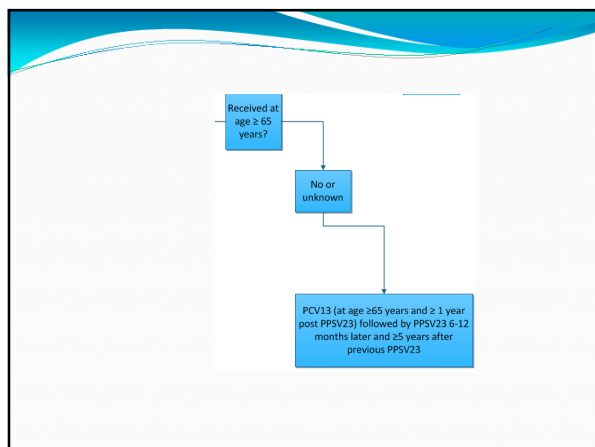


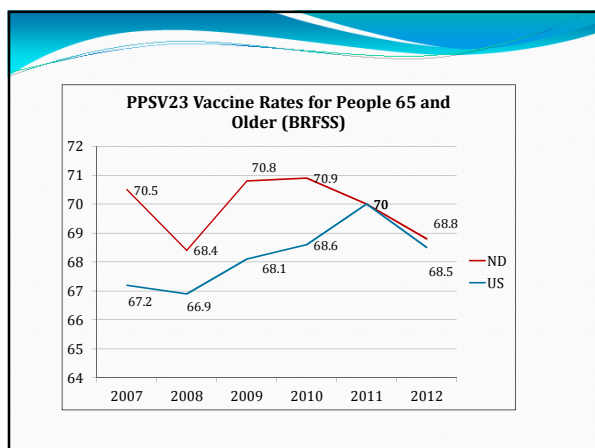












Strategies for Increasing Vaccination Rates

- Standing orders
- Computerized Record Reminders
- Chart Reminders
- Performance Feedback
- Home Visits
- Mailed/ Telephone Reminders
- Patient Education
- Personal Health Records

Medicare Vaccine Coverage

- Medicare Part B (Medical Insurance) covers influenza and pneumococcal vaccines
 - If a person is uncertain about their vaccination history in the past five years, the pneumococcal vaccine should be given and Medicare will cover the revaccination
- Medicare Part D covers all other ACIP recommended vaccines

Type your question in the chat window to the right

After the presentation, questions may be sent to:

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Post -Test

- Nurses interested in continuing education credit, visit <http://www.ndhealth.gov/disease/post/default.aspx?PostID=67>
 - Successfully complete the four-question posttest to receive your certificate
- Credit for this session available until Tuesday, January 13, 2015
- This presentation will be posted to our website: www.ndhealth.gov/immunize
